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# What is a "substance use disorder"?

"Substance use disorder" (SUD) includes abuse and dependence

### Abuse

 Recurrent substance use results in failure to fulfill a major role obligation (school, work, family)

 Recurrent use in situations that are physically hazardous

### Abuse, cont.

Recurrent use which leads to legal problems

 Continued use despite persistent or recurrent social or interpersonal problems caused or exacerbated by the effects of the substance.

### Dependence

 Tolerance (more of the substance to achieve the desired effect; less effect with continued use of the same amount)

Withdrawal symptoms

## Dependence, cont.

 Increased use (either larger amounts or use in longer duration than was intended

 Persistent desire or unsuccessful efforts to reduce or control use



 Considerable amount of time spent seeking substance

 Important social, occupational or recreational activities are abandoned due to substance use

## Dependence, cont.

 Substance use continues in spite of knowledge of persistent or recurrent physical or psychological problems related to use.

(DSM-IV-TR, pp. 197-199)



# How frequently do SUDs occur in the general population?

2002 National Household Study of Drug Use and Health (SAMHSA)

 About half of Americans (51.0 percent) aged 12 or older reported being current drinkers of alcohol.



• More than one-fifth (22.9 percent) of persons aged 12 or older participated in binge drinking (5 or more drinks at the same occasion) at least once in the 30 days preceding the survey.

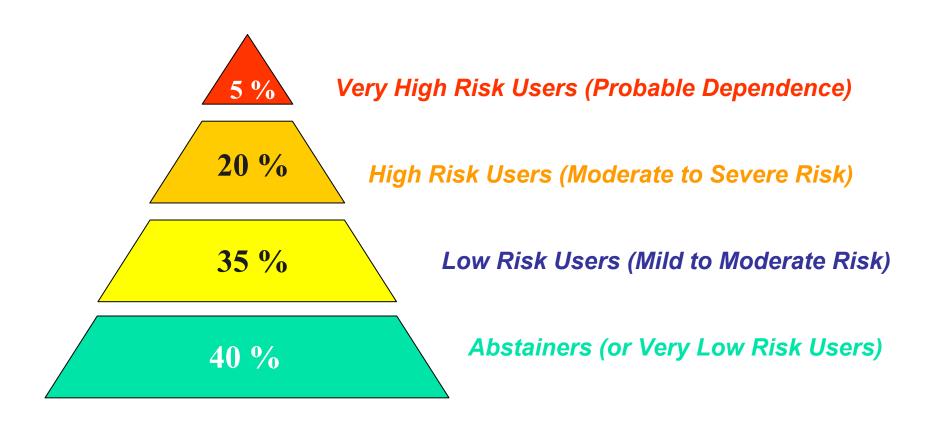


 Heavy drinking was reported by 6.7 percent of the population aged 12 or older.

(U.S. DHHS, SAMHSA, 2003)

#### **Drinker's Pyramid**

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## What Do We Know About Trauma and Substance Use Disorders?

Stress, the brain, and drugs (including alcohol)

Overlap between neurocircuits that respond to stress and those that respond to drugs (Piazza, et al. 1996; Kreek and Koob, 1998; Piazza and le Moal, 1998).

#### Stress, cont.

 Animal studies – stress facilitates both the initiation and the reinstatement of AOD use after a period of abstinence (Kreek and Koob, 1998)

 Stress both enhances responsiveness to ATOD use and mediates the rewarding effects (Brady et al, 1999)

#### Stress, cont.

 For humans, problems with alcohol use are associated with both acute and chronic stressors in which the subject perceives powerlessness (Seeman and Seeman, 1992)



#### Relationship to PTSD

 30 to 60% of people treated for SUDs may have life-time PTSD

### PTSD, cont.

- People who are subjected to chronic stress or with symptoms of PTSD
  - poorly regulated hormonal responses that do not return to normal when the stress is relieved
  - more prone to stress related disorders, including relapse



#### Oklahoma City Bombing

 Substance abuse increased by 3 percent within 3 months of the event (unpublished)

 Only persons with PTSD co-morbid with other psychiatric disorders used alcohol to cope (North et al, 1999)



- Stewart et al (2002) impact of the 1998 crash in which there were no survivors
- Small, rural community in Nova Scotia
- Liquor sales records, standardized questionnaires and qualitative interviews



 Community volunteers were exposed to gruesome experiences, such as dismembered human remains.

Preliminary data suggested that alcohol use increased about one year after the disaster, not during the acute phase of the disaster.

### Swissair Flight 111, cont.

 Largest effects occurred in volunteers who showed symptoms of PTSD

 Screening for PTSD in disaster affected populations can help identify those in most need of intervention.

#### 9/11 (Valhalla et al., 2004)

 Household telephone survey conducted 1 to 2 months after 9/11, and again at 6 months after.

 57.8% reported at least 1 PTSD symptom, and 7.5% reported symptoms consistent with probably PTSD.

 30.8% reported increases in the use of cigarettes, alcohol, or marijuana.

Respondents who reported psychological symptoms were more likely to also report an increase in substance use.

#### Second survey conducted six months after the attack

Because the prevalence of PTSD had declined substantially to 1.5 percent, Valhalla et al. hypothesized that substance use would also decline at a similar rate.

Instead, he found only a slight decline overall (27.3%)

 No statistically significant difference between persons directly affected ant hose who where not.

### Prevalence of SUDs follows the prevalence of substance use

Likely that NYC is now experiencing a higher rate of SUDs now than before 9/11, as well as the physical health sequelae that often accompany use of ATOD.

 Use of ATOD may mask psychological symptoms or delay resolution of psychological symptoms related to 9/11.

Initial use of ATOD to relieve psychological distress may have resolved the distress, but may have become addicted in the process.



# How can people with substance use disorders be identified and assisted in trauma situations?

Screen for PTSD symptoms

Use a screening tool for SUDs (AUDIT)

 Establish referral relationships before the disaster.

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#### The Audit Instrument

- 10 Questions:
  - Alcohol Use (Questions 1-3)
  - Signs of Dependence (Questions 4-6)
  - Related Problems (7-10)
- Questions 1-3 can be used as a prescreen;
  - (Example: pregnant women, underage youth)
- Can be scored to estimate SEVERITY ZONES.

(Higgins- Biddle, John, 2003)

# 10 Questions: Approximately 2 Minutes

- Alcohol Use (Questions 1-3)
  - 1=Frequency of drinking
  - 2=Typical quantity
  - 3=Frequency of heavy drinking



- Signs of Dependence (Questions 4-6)
  - 4=Impaired control over drinking
  - 5=Increased salience of drinking
  - 6=Morning drinking



- Related Problems (7-10)
  - 7=Guilt after drinking
  - 8=Blackouts
  - 9=Alcohol-related injuries
  - 10=Others concerned about drinking

Babor, Higgins-Biddle, Saunders & Monteiro, 2001, WHO. http://www.int/substance\_abuse/PDFfiles/auditbro.pdf



- Level I: AUDIT Score 0-7
  - Abstainers or Very Low Riske Users

- Level II: AUDIT Score 8-15
  - Low Risk Users (Mild to Moderate Risk)



#### Level III: AUDIT Score 16-19

High Risk Users (Moderate to Severe Risk)

Level IV: AUDIT Score > 20

 Very High Risk Users (Probable Dependence)